

INTEGRATED
WASTE
MANAGEMENT
BOARD

Physical Hazards at Solid Waste Facilities, Sites, and Operations

FACT SHEET

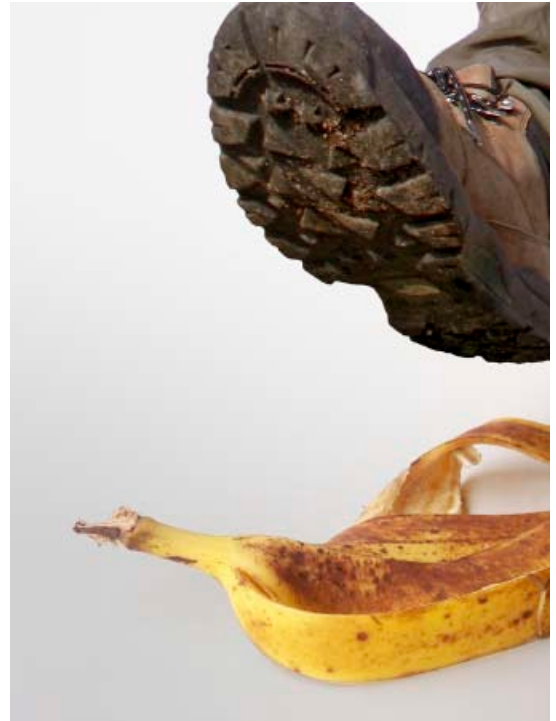
The California Integrated Waste Management Board (CIWMB) provides this information as a tool for solid waste business and industry employees to use while conducting day-to-day operations. By using this fact sheet, the CIWMB hopes to increase the reader's knowledge of potential physical hazards and how to protect themselves from them.

This information is from CIWMB site safety plans which were reviewed by a certified industrial hygienist and certified safety professional.

There are numerous physical hazards associated with solid waste facilities, sites, and operations, which if not identified and addressed, could present operational problems as well as cause personal injury to the work force. In order to minimize physical hazards, standard safety protocols have been developed and should be followed at all times.

Sharps

Potential hazards from sharps include cuts and punctures from handling or stepping on various materials such as hypodermic needles, broken glass, razor blades, bottles of unknown/unlabeled substances, and other sharp materials. Adequate hand and foot protection and tools should be used to prevent injury. Hand protection should include gloves. Foot protection should include steel-toed and/or steel mid-sole impermeable boots.



Tripping, Slipping, and Falling Hazards

In order to minimize tripping hazards caused by debris, job supplies, and equipment, material should be removed daily from work areas and placed in their respective storage areas.



Head Injuries

To protect the employee's head from impact and penetration of falling objects, hard hats should be used.

Back Injuries

Personnel should use proper lifting techniques (see page 2) whenever they lift heavy objects.

Traffic

All site personnel should wear high-visibility protective clothing, make sure traffic can see you and, when possible, remain a safe distance from traffic.

Respiratory Injuries

Dust masks or respirators should be used as appropriate to each task or work assignment.



Lifting

Material handling is one of the most common causes of injury. Training for safe material handling cannot be expected to solve the problem, but if it is properly applied and reinforced, training should help to alleviate most problems. Contributing factors include:

- Posture (seated and standing).
- Improper lifting technique.
- Twisting with a load.
- Bending at the waist.
- Frequency of lifts.
- Weight and size of objects.



Performing the lift:

- Face the object squarely.
- Get as close as you can.
- Squat down, bend your knees, and keep your back straight.
- Grip the object firmly, take a deep breath, and tighten your stomach muscles.
- With one smooth motion use your legs to bring yourself to a standing position, keeping your back straight.

For additional proper lifting techniques, contact your Health and Safety Program representative.



Noise Hazards

Employees may not be exposed to noise greater than the levels established by Cal/ OSHA (90 decibels threshold weighted average for an 8-hour day). If levels are higher than this, engineering, administrative, or work practice controls are required. When the noise levels cannot be controlled through these methods, hearing protection should be provided. Whenever noise levels exceed 85 dBA the employer must implement a hearing conservation program and monitor levels. Hearing protection should be worn and replaced frequently if needed.

Equipment

All equipment must be in good working condition when in use at the site. Equipment that does not appear to be in good repair or appears to be unsafe should not be put into service until all necessary repairs are made.



Heat Stress

With the possible combination of ambient factors such as high air temperature, low air movement, high radiant heat, and protective clothing, the potential for heat stress is a concern. All on-site personnel should be made familiar with the symptoms of heat stress and the conditions during which it may occur. Heat stress symptoms may include elevated heart rate, nausea, headache, lightheadedness, lack of coordination, decreased job performance, or slurred speech.



Employers should ensure employees have access to potable drinking water of one quart per employee per hour for drinking for the entire shift.

Employers should provide those employees who are suffering from heat stress or who need a preventative recovery period with accessible shade. Cooling measures can substitute for shade as long as the employer proves that the measure is as effective as the shade. A vehicle used by staff can be the shade as long as the vehicle has its air conditioner on. Emergency medical services should be called when heat stress is suspected.

HEAT STRESS CONDITION	CAUSES AND SYMPTOMS
<i>Heat rash</i>	Also known as prickly heat. Skin remains wet as sweat does not evaporate.
<i>Heat cramps</i>	Painful muscle spasms that are caused by lack of salt in the body. Usually a result of sweating heavily and drinking large amounts of water without replacing the body's salt loss.
<i>Heat exhaustion</i>	Continuous loss of fluids and salt from sweating can cause heat exhaustion. Symptoms include heavy sweating, cool and moist skin, and a weak pulse. Possible fainting, weakness, dizziness, nausea, diarrhea, blurred vision and a normal or slightly high body temperature. Advanced stages can include vomiting or loss of consciousness.
<i>Heat stroke</i>	Most serious heat illness—when sweating no longer helps the body regulate its internal temperature. Skin is hot, may or may not be dry. Often red or spotted. Individual is slightly confused & disoriented. Delirium, convulsions, or even unconsciousness may occur. Body temperature may be 105 degrees Fahrenheit or higher.

Biological Hazards

The following summarizes the potential biological hazards:

HAZARD	AVOIDANCE
<i>Animal and insect bites or stings:</i> <ul style="list-style-type: none">• <i>Bees</i>• <i>Wasps</i>• <i>Ticks</i>• <i>Snakes</i>• <i>Spiders</i>	Animal and insect bites and stings can cause localized swelling, itching, and minor pain that can be handled by first aid treatment. In sensitive individuals, however, effects can be more serious, such as anaphylactic shock that can lead to severe reactions in the circulatory, respiratory, and central nervous system, and in some cases even death. Do not attempt to capture any wild or semi-wild animals such as cats, rats, or snakes due to the possibility of a bite or parasitic infestation.



For further guidance on this issue, please contact your local enforcement agency (LEA). If you are not sure who your LEA is, please visit our LEA Directory web page at www.ciwmb.ca.gov/LEACentral/LEADirectory/. You can also contact the California Integrated Waste Management Board's Waste Compliance and Mitigation Program for additional information at (916) 341-6360.

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